

DERWENT-ACC-NO: **1999-267384**

DERWENT-WEEK: 200504

COPYRIGHT 2006 DERWENT INFORMATION LTD

TITLE: Colloid solution of noble metals or copper - useful as  
an optical material, and carrier for antibodies,  
catalysts etc

PATENT-ASSIGNEE: NIPPON PAINT CO LTD[NIPA]

PRIORITY-DATA: 1997JP-0209981 (July 17, 1997)

PATENT-FAMILY:

| PUB-NO        | PUB-DATE         | LANGUAGE | PAGES | MAIN-IPC    |
|---------------|------------------|----------|-------|-------------|
| JP 11080647 A | March 26, 1999   | N/A      | 012   | C09D 017/00 |
| JP 3594803 B2 | December 2, 2004 | N/A      | 018   | C09D 017/00 |

APPLICATION-DATA:

| PUB-NO       | APPL-DESCRIPTOR | APPL-NO        | APPL-DATE    |
|--------------|-----------------|----------------|--------------|
| JP 11080647A | N/A             | 1998JP-0138919 | May 20, 1998 |
| JP 3594803B2 | N/A             | 1998JP-0138919 | May 20, 1998 |
| JP 3594803B2 | Previous Publ.  | JP 11080647    | N/A          |

INT-CL (IPC): B01F017/16, B01F017/18, B01F017/28, B01F017/52, B01J013/00, C08K003/00, C08L101/00, C09D005/38, C09D007/12, C09D017/00, C09D201/02, G02B005/22

RELATED-ACC-NO: 2005-033926

ABSTRACTED-PUB-NO: JP 11080647A

BASIC-ABSTRACT:

NOVELTY - A colloidal solution of noble metals or **copper comprises colloidal particles of noble metals or copper and a polymer dispersant** for pigment.

DETAILED DESCRIPTION - (a) The noble metal is gold, silver or platinum. (b) The **polymer dispersant** is a comb structure polymer having a pigment compatible group in the main chain and/or plural side chains, and also plural side chains constituting a solvating part, a polymer having plural pigment compatible parts comprising pigment compatible group in the main chain or a linear polymer having a pigment compatible part comprising pigment compatible group at one terminal of the main chain. (c) The comb type polymer has 2-3 000 of the pigment compatible group in the molecule and 2-1.000 of the side chain constituting the solvating part and having an average molecular weight of 2 000-1 000 000. (d) The polymer having plural pigment compatible parts comprising pigment compatible group in the main chain has 2-3 000 of pigment compatible group in the molecule and an average molecular weight of 2 000-1 000 000. (e) The linear polymer having a pigment compatible part comprising pigment compatible group at one terminal of the main chain has 2-3 000 of pigment compatible group in the molecule and an average molecular weight of 2 000-1 000 000. (g) A method for manufacturing colloidal solution of noble metals or copper comprises dissolving a compound of noble metals or copper in a solvent, adding a **polymer pigment dispersant** to the solvent and reducing the compound to the noble metal or copper. (h) : The reduction of the compound is conducted by adding an amine, especially alkanol amine, or a reducing agent including sodium borohydride to the solution.

USE - The colloidal solution is used as optical material, carrier of catalyst, antibody etc. and as colouring material for paint and plastic material.

ADVANTAGE - The colloidal solution has sufficient colouring capacity without coagulation. (RA)

CHOSEN-DRAWING: Dwg.0/0

DERWENT-CLASS: A60 B04 D16 G02 J04 P81

CPI-CODES: A08-E02; A08-M01A; B04-C03; B05-A03; B12-M07; D05-A01A5;  
G02-A03D;  
J04-A03; J04-E03;

----- KWIC -----

Basic Abstract Text - ABTX (1):

NOVELTY - A colloidal solution of noble metals or copper comprises colloidal

particles of noble metals or copper and a polymer dispersant for pigment.

DETAILED DESCRIPTION - (a) The noble metal is gold, silver or platinum. (b)

The polymer dispersant is a comb structure polymer having a pigment compatible

group in the main chain and/or plural side chains, and also plural side chains constituting a solvating part, a polymer having plural pigment compatible parts comprising pigment compatible group in the main chain or a linear polymer having a pigment compatible part comprising pigment compatible group at one terminal of the main chain. (c) The comb type polymer has 2-3 000 of the pigment compatible group in the molecule and 2-1.000 of the side chain constituting the solvating part and having an average molecular weight of 2 000-1 000 000. (d) The polymer having plural pigment compatible parts comprising pigment compatible group in the main chain has 2-3 000 of pigment compatible group in the molecule and an average molecular weight of 2 000-1 000

000. (e) The linear polymer having a pigment compatible part comprising pigment compatible group at one terminal of the main chain has 2-3 000 of pigment compatible group in the molecule and an average molecular weight of 2 000-1 000 000. (g) A method for manufacturing colloidal solution of noble metals or copper comprises dissolving a compound of noble metals or copper in a

solvent, adding a polymer pigment dispersant to the solvent and reducing the compound to the noble metal or copper. (h) : The reduction of the compound is conducted by adding an amine, especially alkanol amine, or a reducing agent including sodium borohydride to the solution.

Derwent Accession Number - NRAN (1):

1999-267384